CLAIM AMENDMENTS

The claims are amended as follows.

1. – 42. (Cancelled)

43. (New) A laser apparatus, comprising:

first and second reflectors defining a laser cavity;

a gain medium to emit a beam along an optical path between said first and second reflectors; and

a compensating member coupled to at least one of said reflectors and configured to thermally adjust an optical path length between said reflectors.

44. (New) The laser apparatus of claim 43, wherein said compensating member is to position said first reflector with respect to said second reflector.

45. (New) The laser apparatus of claim 43, further comprising a thermoelectric controller operatively coupled to said compensating member, said thermoelectric controller to thermally adjust a length of said compensating member.

46. (New) The laser apparatus of claim 44 wherein the gain medium has first and second output facets, said first output facet to emit said beam along said optical path, said first reflector positioned in said optical path, said second output facet defining said second reflector, said first reflector and said second output facet defining said laser cavity.

47. (New) The laser apparatus of claim 44, wherein said compensating member is thermally conductive.

48. (New) The laser apparatus of claim 44, wherein said compensating member has a high coefficient of thermal expansion.

49. (New) The laser apparatus of claim 46, wherein said gain medium and said first reflector are passively athermalized with respect to each other.

50. (New) The laser apparatus of claim 43, further comprising:

a detector associated with said laser cavity and configured to detect losses associated with said laser cavity; and

a controller operatively coupled to said compensating element and said detector and configured to thermally adjust a length of said compensating member according to error signals derived from said detector.

51. (New) The laser apparatus of claim 50, further comprising a dither element operatively coupled to said laser cavity and configured to introduce frequency modulation to said laser cavity.

52. (New) A method for tuning a laser cavity, comprising:

providing first and second reflectors to reflect light emitted from a gain medium, said first and second reflectors defining said laser cavity; and

adjusting an optical path length of said laser cavity by thermally adjusting a length of a compensating member that is coupled to at least one of said reflectors.

53. (New) The method of claim 52, wherein said thermally adjusting said compensating member comprises heating or cooling said compensating member with a thermoelectric controller coupled to said compensating member.

54. (New) The method of claim 52, further comprising passively athermalizing said laser cavity.

55. (New) The method of claim 52, further comprising monitoring losses associated with said laser cavity.

56. (New) The method of claim 55, wherein said thermally adjusting is carried out according to error signals derived from said monitoring of said losses associated with said laser cavity.

57. (New) The method of claim 55, further comprising introducing a frequency modulation into said laser cavity.

58. (New) A method for generating a tunable coherent optical output, comprising:

providing an external cavity laser having an excited gain medium with first and second output facets and emitting a coherent beam from said first output facet along an optical path, and an end mirror positioned in said optical path, said end mirror and said second output facet defining an external cavity; and

adjusting an optical path length of said external cavity by thermally adjusting a length of a compensating member that is coupled to said end mirror.

59. (New) The method of claim 58, wherein said thermally adjusting said compensating member comprises heating or cooling said compensating member with a thermoelectric controller coupled to said compensating member.

60. (New) The method claim 58, further comprising passively athermalizing said external cavity.

61. (New) The method of claim 58, further comprising monitoring external losses associated with said external cavity.

62. (New) The method of claim 61, wherein said monitoring comprising monitoring voltage across said gain medium.

63. (New) The method of claim 61, further comprising introducing a frequency modulation into said external cavity.

64. (New) The method of claim 61, wherein said thermally adjusting is carried out according to error signals derived from said monitoring of said frequency modulation introduced to said external cavity.

65. (New) A laser apparatus, comprising:
first and second reflectors defining a laser cavity;
means to emit light along an optical path between said reflectors; and
means for thermally adjusting a length of the optical path between said reflectors.

66. (New) The laser apparatus of claim 65, wherein said thermally adjusting means comprises a compensating member to thermally position said first reflector.

67. (New) The laser apparatus of claim 66, wherein said thermally adjusting means further comprises a thermoelectric controller to thermally adjust a length of said compensating member.

68. (New) The laser apparatus of claim 65, further comprising means for passively thermally stabilizing said laser cavity.